What is claimed is:

1.   A method of adaptive synchronization of a data sink device to a data source device coupled by a USB, comprising the steps of:

receiving data at a buffer of said sink device

5   at an average data rate representative of a data rate of said source device;

determining a data level for said buffer based on input packet size and output packet size;

comparing an accumulated data level for said

10 buffer with a threshold level; and

correcting a clock frequency for said sink device when said accumulated data level exceeds said threshold level.

2.   The method according to claim 1, wherein said correcting step comprises the step of:

correcting the clock frequency by an amount equal to a constant K divided by the time required for

5   the accumulated data level to drift from a reference level to the threshold level.

3.   The method according to claim 1, further comprising step of:

inhibiting next execution of said comparing step and said correcting step for a predetermined

5   period after said correcting step.

4.   The method according to claim 3, wherein the predetermined period is between three or five times said drift time.

5.   The method according to claim 3, wherein said predetermined period is reduced if said data level traverses said reference level or exceeds twice the threshold level.

6.   The method according to claim 2, wherein the reference level is the data level measured over a first measurement period.

7.   The method according to claim 1, wherein said comparing step is executed periodically.

8.   The method according to claim 1, wherein the threshold level is set to be greater than three times a maximum data level jitter.

9.   The method according to claim 1, wherein a size of the buffer is set to be greater than three times said threshold level.

10.   A system for adaptive synchronization of a data sink device to a data source device, comprising:
          a source device; and

a sink device coupled to said source device by

5 a USB, and comprising a buffer, and

wherein said sink device stores data in said

buffer at an average data rate representative of a

data rate of said source device;

determines a data level for said buffer based

10 on input packet size and output packet size;

compares an accumulated data level for said

buffer with a threshold level; and

corrects a clock frequency for said sink device

when said accumulated data level exceeds said

15 threshold level.

11.   The system according to claim 10, wherein said

sink device corrects the clock frequency by an amount

equal to a constant K divided by the time required for

the accumulated data level to drift from a reference

5 level to the threshold level.

12.   The system according to claim 10, wherein said

sink device inhibits next execution of said comparing

operation and said correcting operation for a

predetermined period after said correcting operation.

13.   The system according to claim 12, wherein the

predetermined period is between three or five times

said drift time.

14. The system according to claim 12, wherein said predetermined period is reduced if said data level traverses said reference level or exceeds twice the threshold level.

15. The system according to claim 11, wherein the reference level is the data level measured over a first measurement period.

16. The system according to claim 10, wherein said comparing operation is executed periodically.

17. The method according to claim 10, wherein the threshold level is set to be greater than three times a maximum data level jitter.

18. The method according to claim 10, wherein a size of the buffer is set to be greater than three times said threshold level.

19. A sink device for receiving data from a USB-coupled source device, comprising:

a buffer;

receiving means for receiving data at said buffer of said sink device at an average data rate representative of a data rate of said source device;

determining means for determining a data level

for said buffer based on input packet size and output packet size;

10   comparing means for comparing an accumulated data level for said buffer with a threshold level; and

correcting means for correcting a clock frequency for said sink device when said accumulated data level exceeds said threshold level.

20.   The sink device according to claim 19, wherein said correcting means corrects the clock frequency by an amount equal to a constant K divided by the time required for the accumulated data level to drift from

5 a reference level to the threshold level.

21.   The sink device according to claim 19, further comprising:

inhibiting means for inhibiting next execution of said comparing step and said correcting step for a

5 predetermined period after said correcting step.

22.   The sink device according to claim 21, wherein the predetermined period is between three or five times said drift time.

23.   The sink device according to claim 21, wherein said predetermined period is reduced if said data level traverses said reference level or exceeds twice

the threshold level.

24.   The sink device according to claim 20, wherein the reference level is the data level measured over a first measurement period.

25.   The sink device according to claim 19, wherein said comparing means is executed periodically.

26.   The sink device according to claim 19, wherein the threshold level is set to be greater than three times a maximum data level jitter.

27.   The sink device according to claim 19, wherein a size of the buffer is set to be greater than three times said threshold level.